C14-EE-**403**

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BOARD DIPLOMA EXAMINATION, (C-14)
MARCH/APRIL-2019
DEEE - FOURTH SEMESTER EXAMINATION

POWER SYSTEMS - I (GENERATION)

Time: 3 Hours] [Max. Marks : 80

PART-A

10x3=30M

Instructions: 1) Answer **all** questions. Each question carries **Three** marks.
2) Answers should be brief and shall not exceed five simple sentences.

1) State the limitations of Non- Conventional type of Sources.

2) Define (i) Pulverization (ii) Condensation.

3) State the need of energy auditing.

4) A hydropower plant operates under an effective head of 50m and a discharge of 94m^3/sec. Determine the power developed.

5) Classify the Hydro Electric power plant based on location.

6) List the Nuclear Fules used in Nuclear power plant.

7) State the need of Coolant, Reflector and Control Rods in Nuclear reactor.

8) State the working principle of Solar Cell.

9) Define a) Load curve b) Maximum Demand.

10) State the effect of Load Factor and Diversity Factor on the cost of generation.

PART-B

5x10=50M

Instructions: 1) Answer any **five** questions.
2) Each question carries **ten** marks.
3) Answers should be comprehensive and the criteria for valuation is the content but not the length of the answer.

11) (a) List the requirements for setting up of thermal power station.

(b) Mention the requirements for selection of site for Thermal power plant.

12) (a) State the causes of pollution in thermal power plant.

(b) Explain the method of generating electrical power using Geo-Thermal power

13) Explain the working of Medium head hydro electric power station with layout diagram.

14) Explain the working of reactors in Nuclear power stations.

15) Explain the construction and working of Wind Mill with diagram.

16) Explain the working principle of different concentrating collectors with diagram.

17) (a)Differentiate between integrated operation and isolated operation of power stations.

(b)What is the effect of power factor on elctricity tarrif and list out the methods to improve P.F.

18) The load of power plant on a particular day is as follows

Time in Hrs.	12AM-5AM	5AM-8AM	8AM-6PM	6PM-8PM	8PM-10PM	10PM-12PM
Load in MW	20	60	100	120	80	20

Determine i) The energy generated per day ii) Load Factor
iii) Diversity Factor of the plant.

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